



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
 22.12.1999 Bulletin 1999/51

(51) Int. Cl.⁶: H04N 1/00, H04N 5/913,
 G11B 20/00

(43) Date of publication A2:
 19.08.1998 Bulletin 1998/34

(21) Application number: 98102443.3

(22) Date of filing: 12.02.1998

(84) Designated Contracting States:
 AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
 NL PT SE
 Designated Extension States:
 AL LT LV MK RO SI

(72) Inventor: Nakano, Hirotaka
 Minato-ku, Tokyo (JP)

(74) Representative:
 von Samson-Himmelstjerna, Friedrich R., Dipl.-
 Phys. et al
SAMSON & PARTNER
 Widenmayerstrasse 5
 80538 München (DE)

(30) Priority: 12.02.1997 JP 2781597

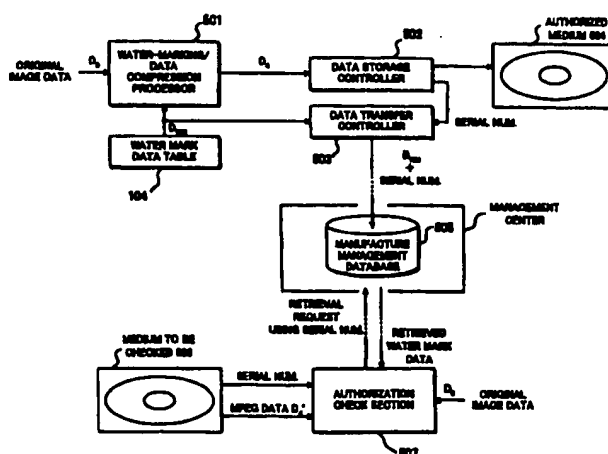
(71) Applicant: NEC CORPORATION
 Tokyo (JP)

(54) **Electronic watermark system**

(57) An electronic watermark system invisibly embeds watermark information into original image data and the watermarked image data is transferred to a first medium (504, 604). At the same time, the embedded watermark information is transferred to a second medium (505, 605). When a medium questioned is

found, its watermark information can be easily identified by searching the second medium. Alternatively, the watermarked image data and the embedded watermark information are transferred to different storage areas (705, 706) of the same medium (704), respectively.

FIG. 5





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 10 2443

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	J. ZHAO: "A WWW Service to Embed and Prove Digital Copyright Watermarks" PROCEEDINGS OF THE EUROPEAN CONFERENCE ON MULTIMEDIA APPLICATIONS, SERVICES AND TECHNIQUES, vol. 2, 28 May 1996 (1996-05-28), pages 695-709, XP000199921 Louvain, BE * page 701, paragraph 4 - page 702; figure 2 *	1-14	H04N1/00 H04N5/913 G11B20/00
X	--- KOMATSU N ET AL: "AUTHENTICATION SYSTEM USING CONCEALED IMAGE IN TELEMATICS" MEMOIRS OF THE SCHOOL OF SCIENCE AND ENGINEERING. WASEDA UNIVERSITY, no. 52, 1 January 1988 (1988-01-01), pages 45-60, XP000603853 ISSN: 0369-1950 * paragraphs [0002], [0003] *	1-14	
X	EP 0 450 841 A (GTE LABORATORIES INC) 9 October 1991 (1991-10-09) * column 1, line 19 - line 42 * * column 2, line 20 - column 3, line 9 * * column 4, line 14 - line 19 * * column 4, line 37 - line 55; claims *	1-14	TECHNICAL FIELDS SEARCHED (Int.Cl.6) H04N G11B G06F
A	US 5 291 598 A (GRUNDY GREGORY) 1 March 1994 (1994-03-01) * the whole document *	1-14	
A	WO 96 41468 A (MACROVISION CORP) 19 December 1996 (1996-12-19) * the whole document *	1-14	

-/--			
- The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 8 October 1999	Examiner Foglia, P
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document			

EPO FORM 1503 03/92 (P04C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 10 2443

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
P,X	WO 97 14087 A (ERICKSON JOHN S) 17 April 1997 (1997-04-17) * page 5, line 16 - line 23 * * page 12, line 22 - line 28 * * page 19, line 1 - line 27 * * page 33, line 1 - page 34, line 9 * * page 61, line 21 - line 27 * * claims 121,124 * -----	1-14	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 8 October 1999	Examiner Foglia, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 10 2443

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-10-1999

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0450841	A	09-10-1991	US 5054064 A	01-10-1991
			US 5046092 A	03-09-1991
			US 5046090 A	03-09-1991
			US 4991208 A	05-02-1991
			CA 2039123 A	30-09-1991
			DE 69121444 D	26-09-1996
			DE 69121444 T	13-03-1997
			JP 4223787 A	13-08-1992

US 5291598	A	01-03-1994	US 5375240 A	20-12-1994

WO 9641468	A	19-12-1996	US 5659613 A	19-08-1997
			AU 700013 B	17-12-1998
			AU 5869396 A	30-12-1996
			CA 2220845 A	19-12-1996
			EP 0830783 A	25-03-1998
			JP 11507160 T	22-06-1999

WO 9714087	A	17-04-1997	US 5765152 A	09-06-1998
			AU 7662496 A	30-04-1997

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82